

AN 2004:905683 CAPLUS
 DN 141:386740
 ED Entered STN: 29 Oct 2004
 TI Lyotropic liquid crystal systems based on perylenetetracarboxylic acid dibenzimidazole sulfoderivatives and optically anisotropic films formed from them
 IN Nazarov, Victor V.; Sidorenko, Elena N.
 PA Russia
 SO U.S. Pat. Appl. Publ., 26 pp.
 CODEN: USXXCO
 DT Patent
 LA English
 IC ICM C07D498-02
 ICS C07D471-02
 NCL 544014000; 546037000
 CC 75-11 (Crystallography and Liquid Crystals)
 Section cross-reference(s): 28, 41, 73, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2004215015	A1	20041028	US 2003-714057	20031114
	WO 2004096805	A2	20041111	WO 2004-US12919	20040426
	WO 2004096805	C2	20041216		
	WO 2004096805	A3	20050113		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRAI	US 2003-465657P	P	20030425		
	US 2003-714057	A	20031114		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2004215015	ICM	C07D498-02
	ICS	C07D471-02
	NCL	544014000; 546037000
US 2004215015	ECLA	C09K019/34A2; C09K019/34B5B; C09K019/34C
WO 2004096805	ECLA	C07D471/22+235C+235C+221C+221C; C07D491/22+307A+235C+235C+221C+221C; C07D495/22+333A+235C+235C+221C+221C; C07D497/22+327A+235C+235C+221C+221C; C07D497/22+327A+327A+235C+235C+221C+221C; C09K019/34A2; C09K019/34B5B; C09K019/34C

AB **Sulfoderivatives** of perylenetetracarboxylic acid dibenzimidazole are described, as are lyotropic liquid crystal compns. comprising the derivs. The derivs. may be capable of forming optically isotropic or anisotropic films, and of forming films that are at least partially crystalline. Optically anisotropic films (which may be polarizing or retarding films) comprising the derivs. are also described. Use of the films for displays is indicated.

ST perylenetetracarboxylate dibenzimidazole sulfo deriv lyotropic liq crystal; optically anisotropic film perylenetetracarboxylate dibenzimidazole sulfoderiv lyotropic liq crystal

IT Liquid crystals
 (lyotropic; perylenetetracarboxylic acid dibenzimidazole **sulfoderivatives** and lyotropic liquid crystal systems based on them and optically anisotropic films formed from them)

IT Optical films
Polarizing films
(perylenetetracarboxylic acid dibenzimidazole **sulfoderivatives**
and lyotropic liquid crystal systems based on them and optically
anisotropic films formed from them)

IT Optical instruments
(retarders; perylenetetracarboxylic acid dibenzimidazole
sulfoderivatives and lyotropic liquid crystal systems based on
them and optically anisotropic films formed from them)

IT 95-54-5, o-Phenylenediamine, reactions 55034-79-2 784179-99-3
784180-00-3 784180-01-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(perylenetetracarboxylic acid dibenzimidazole **sulfoderivatives**
and lyotropic liquid crystal systems based on them and optically
anisotropic films formed from them)

IT 784179-78-8P 784179-79-9P 784179-82-4P 784179-83-5P 784179-86-8P
784179-87-9P 784179-90-4P 784179-91-5P 784179-94-8P 784179-95-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(perylenetetracarboxylic acid dibenzimidazole **sulfoderivatives**
and lyotropic liquid crystal systems based on them and optically
anisotropic films formed from them)

IT 784179-80-2P 784179-81-3P 784179-84-6P 784179-85-7P 784179-88-0P
784179-89-1P 784179-92-6P 784179-93-7P 784179-96-0P 784179-97-1P
784179-98-2P 784189-70-4P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material
use); PREP (Preparation); USES (Uses)
(perylenetetracarboxylic acid dibenzimidazole **sulfoderivatives**
and lyotropic liquid crystal systems based on them and optically
anisotropic films formed from them)

L30 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

IT 784179-80-2P 784179-81-3P 784179-84-6P

784179-85-7P 784179-88-0P 784179-89-1P

784179-92-6P 784179-93-7P 784179-96-0P

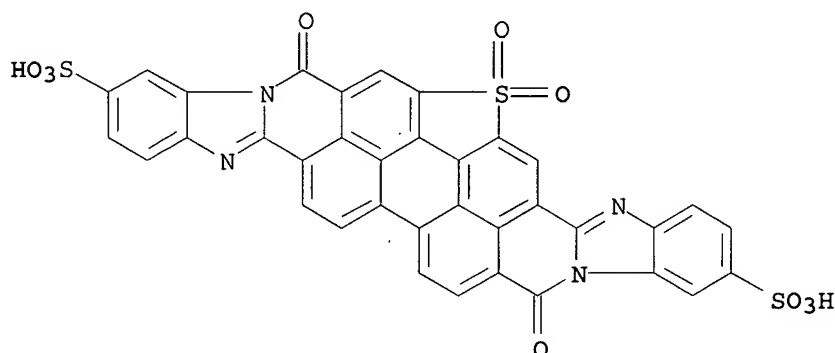
784179-97-1P 784179-98-2P 784189-70-4P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(perylene-tetracarboxylic acid dibenzimidazole sulfoderivatives and lyotropic liquid crystal systems based on them and optically anisotropic films formed from them)

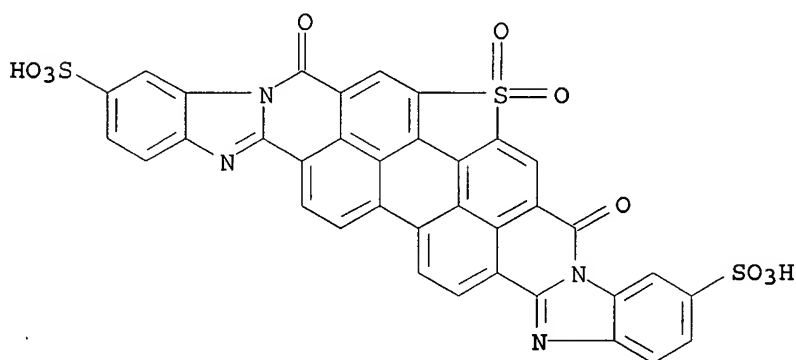
RN 784179-80-2 CAPLUS

CN Bisbenzimidazo[2,1-a:1',2'-b']thieno[2',3',4',5':4,5]phenanthro[2,1,10-def:7,8,9-d'e'f']diisoquinoline-2,12-disulfonic acid, 9,20-dihydro-9,20-dioxo-, 7,7-dioxide (9CI) (CA INDEX NAME)



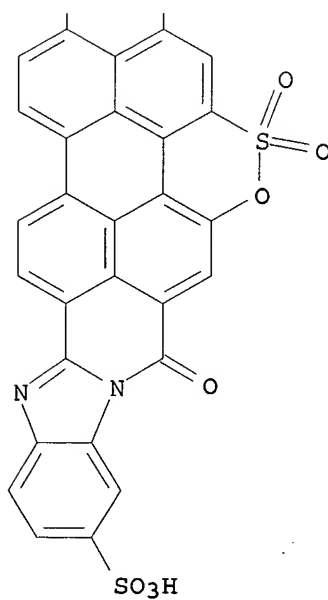
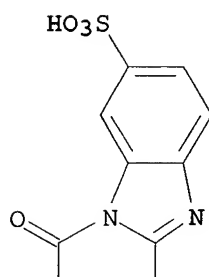
RN 784179-81-3 CAPLUS

CN Bisbenzimidazo[2,1-a:2',1'-a']thieno[2',3',4',5':4,5]phenanthro[2,1,10-def:7,8,9-d'e'f']diisoquinoline-3,13-disulfonic acid, 6,10-dihydro-6,10-dioxo-, 8,8-dioxide (9CI) (CA INDEX NAME)

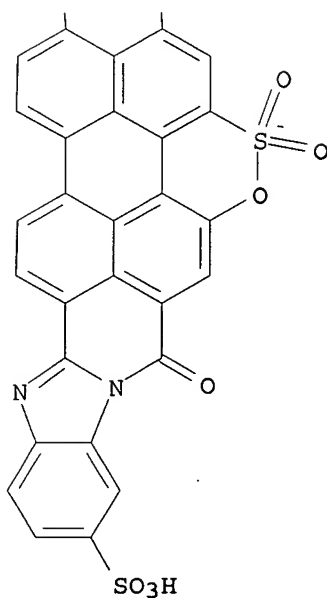
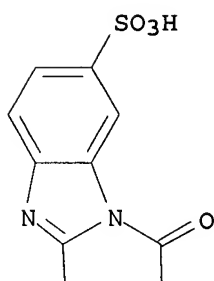


RN 784179-84-6 CAPLUS

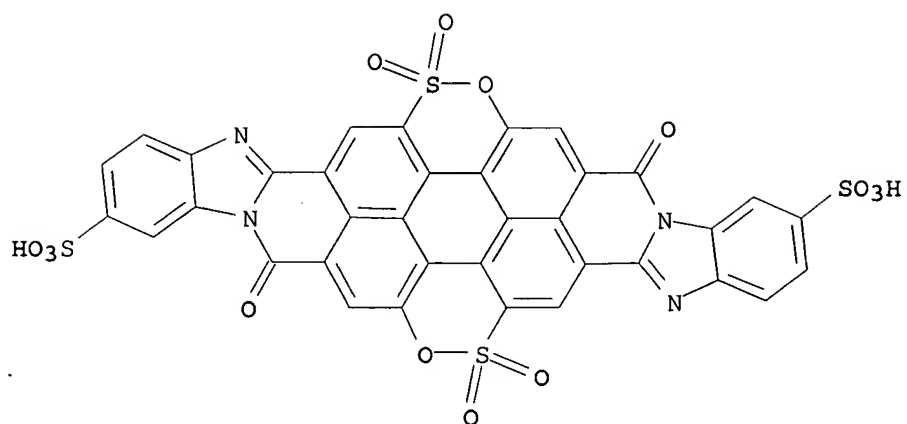
CN Bisbenzimidazo[2,1-a:1',2'-b'] [1,2]oxathiino[6',5',4',3':4,5]phenanthro[2,1,10-def:7,8,9-d'e'f']diisoquinoline-2,13-disulfonic acid, 10,21-dihydro-10,21-dioxo-, 7,7-dioxide (9CI) (CA INDEX NAME)



RN 784179-85-7 CAPLUS
 CN Bisbenzimidazo[2,1-a:2',1'-a'] [1,2]oxathiino[3',4',5',6':4,5]phenanthro[2,1,10-def:7,8,9-d'e'f']diisoquinoline-3,14-disulfonic acid, 6,11-dihydro-6,11-dioxo-, 9,9-dioxide (9CI) (CA INDEX NAME)

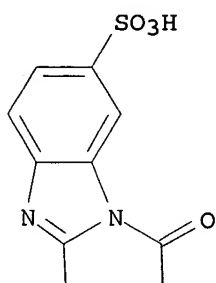


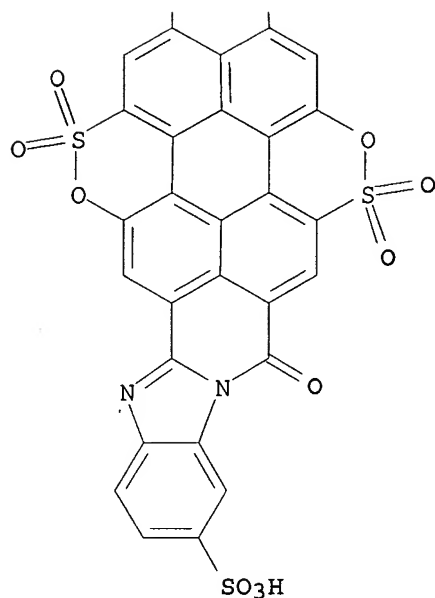
RN 784179-88-0 CAPLUS
 CN Bis[1,2]oxathiino[3''',4''',5''',6''':1'',12'';
 6''',5''',4''',3''':6'',7'']perylene[3'',4'':3,4,5;
 9'',10'':3',4',5']dipyrido[1,2-a:1',2'-a']bisbenzimidazole-2,13-disulfonic
 acid, 10,21-dihydro-10,21-dioxo-, 7,7,18,18-tetraoxide (9CI) (CA INDEX
 NAME)



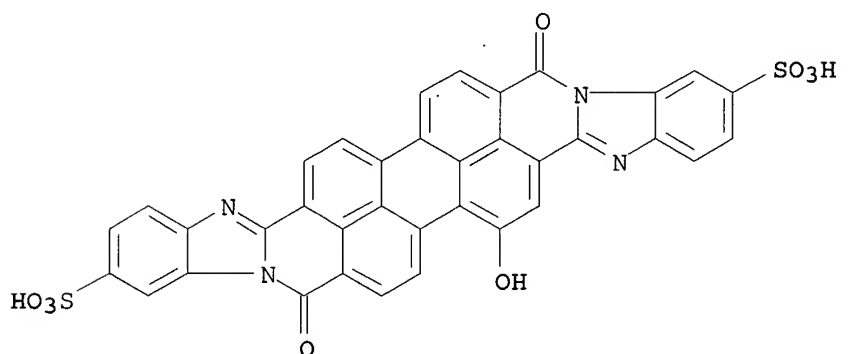
RN 784179-89-1 CAPLUS
 CN Bis[1,2]oxathiino[3''',4''',5''',6''':1'',12'';
 6''',5''',4''',3''':6'',7'']perylene[3'',4'':3,4,5;
 10'',9'':3',4',5']dipyrido[1,2-a:1',2'-a']bisbenzimidazole-3,14-disulfonic
 acid, 6,11-dihydro-6,11-dioxo-, 9,9,20,20-tetraoxide (9CI) (CA INDEX
 NAME)

PAGE 1-A

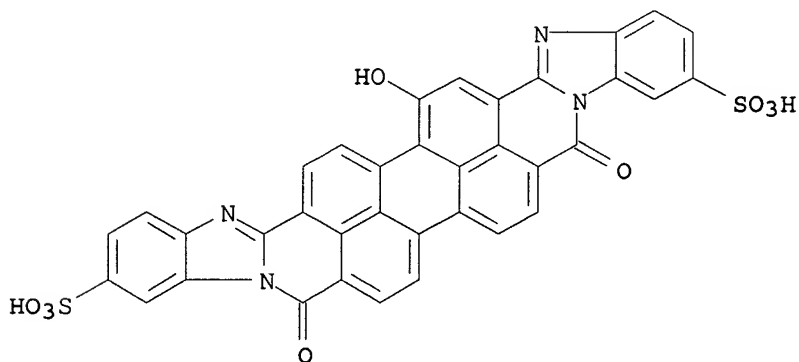




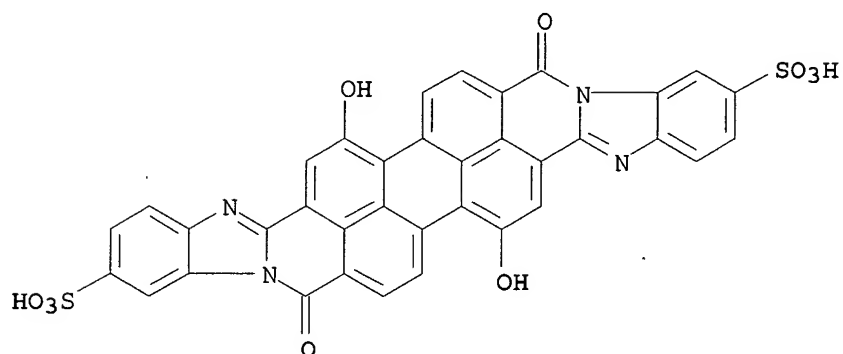
RN 784179-92-6 CAPLUS
 CN Bisbenzimidazo[2,1-a:2',1'-a']anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-2,13-disulfonic acid, 10,21-dihydro-7-hydroxy-10,21-dioxo- (9CI) (CA INDEX NAME)



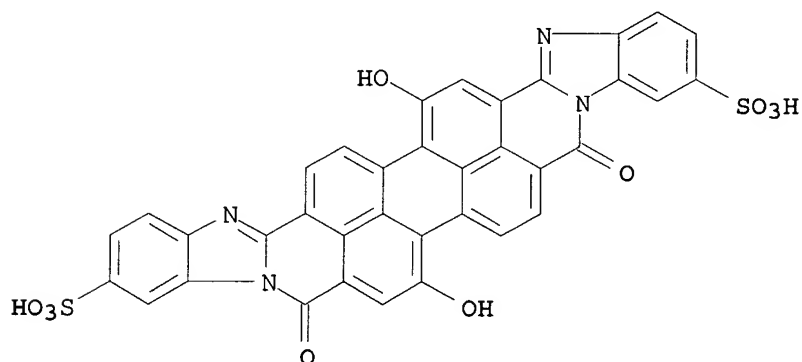
RN 784179-93-7 CAPLUS
 CN Bisbenzimidazo[2,1-a:1',2'-b']anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-3,14-disulfonic acid, 6,11-dihydro-19-hydroxy-6,11-dioxo- (9CI) (CA INDEX NAME)



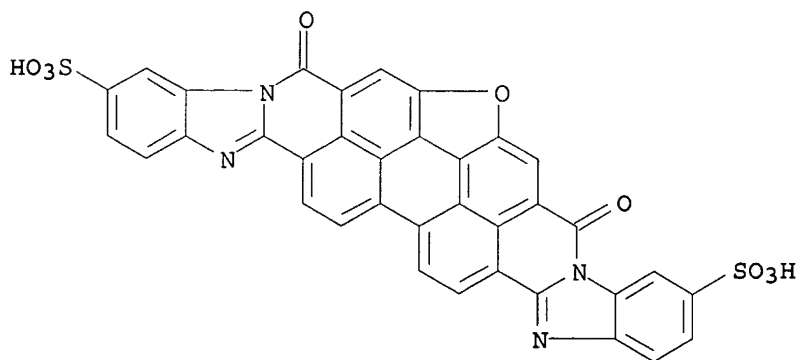
RN 784179-96-0 CAPLUS
 CN Bisbenzimidazo[2,1-a:2',1'-a']anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-2,13-disulfonic acid, 10,21-dihydro-7,18-dihydroxy-10,21-dioxo- (9CI) (CA INDEX NAME)



RN 784179-97-1 CAPLUS
 CN Bisbenzimidazo[2,1-a:1',2'-b']anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-3,14-disulfonic acid, 6,11-dihydro-8,19-dihydroxy-6,11-dioxo- (9CI) (CA INDEX NAME)

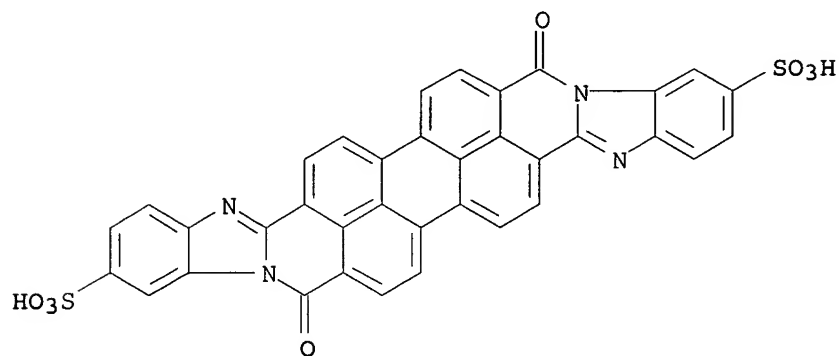


RN 784179-98-2 CAPLUS
 CN Bisbenzimidazo[2,1-a:2',1'-a']furo[2',3',4',5':4,5]phenanthro[2,1,10-def:7,8,9-d'e'f']diisoquinoline-3,13-disulfonic acid, 6,10-dihydro-6,10-dioxo- (9CI) (CA INDEX NAME)



RN 784189-70-4 CAPLUS

CN Bisbenzimidazo[2,1-a:2',1'-a']anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-2,13-disulfonic acid, 10,21-dihydrodihydroxy-10,21-dioxo- (9CI) (CA INDEX NAME)



2 (D1-OH)

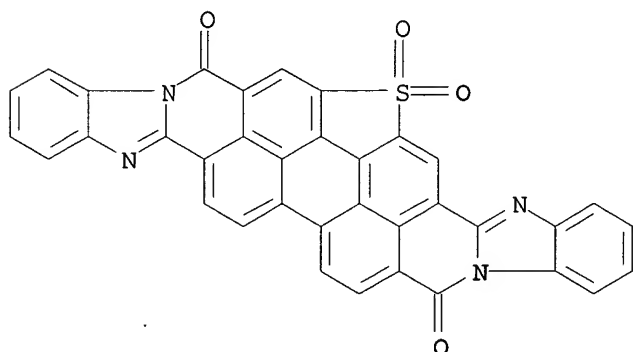
IT 784179-78-8P 784179-79-9P 784179-82-4P
784179-83-5P 784179-86-8P 784179-87-9P
784179-90-4P 784179-91-5P 784179-94-8P
784179-95-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(perylene-tetracarboxylic acid dibenzimidazole sulfoderivatives and
lyotropic liquid crystal systems based on them and optically anisotropic
films formed from them)

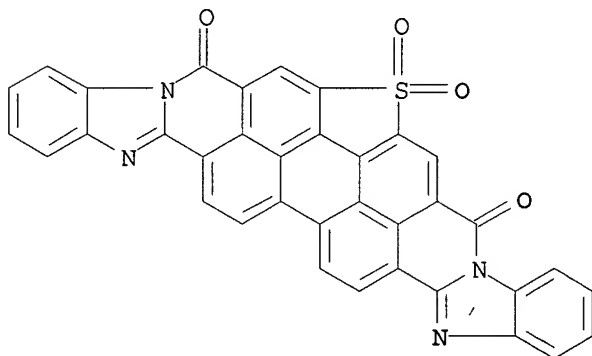
RN 784179-78-8 CAPLUS

CN Bisbenzimidazo[2,1-a:1',2'-b']thieno[2',3',4',5':4,5]phenanthro[2,1,10-
def:7,8,9-d'e'f']diisoquinoline-9,20-dione, 7,7-dioxide (9CI) (CA INDEX
NAME)



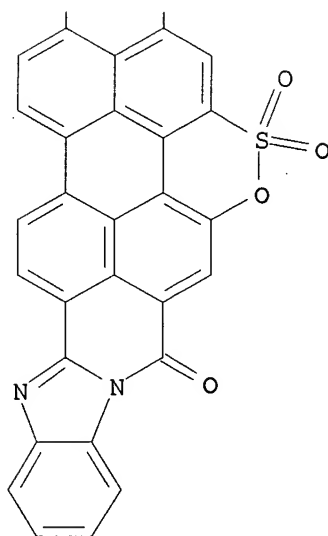
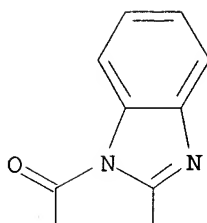
RN 784179-79-9 CAPLUS

CN Bisbenzimidazo[2,1-a:2',1'-a']thieno[2',3',4',5':4,5]phenanthro[2,1,10-
def:7,8,9-d'e'f']diisoquinoline-6,10-dione, 8,8-dioxide (9CI) (CA INDEX
NAME)

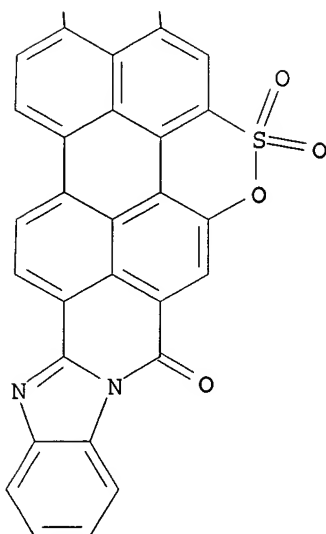
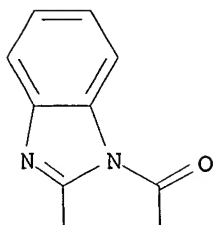


RN 784179-82-4 CAPLUS

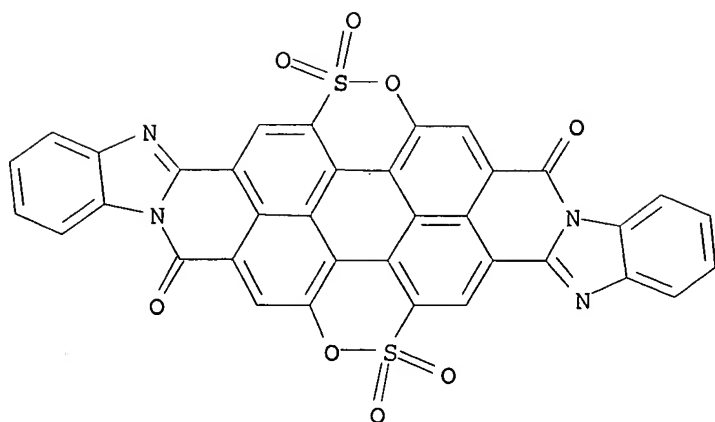
CN Bisbenzimidazo[2,1-a:1',2'-b'] [1,2]oxathiino[6',5',4',3':4,5]phenanthro[2,
1,10-def:7,8,9-d'e'f']diisoquinoline-10,21-dione, 7,7-dioxide (9CI) (CA
INDEX NAME)



RN 784179-83-5 CAPLUS
 CN Bisbenzimidazo[2,1-a:2',1'-a'] [1,2]oxathiino[3',4',5',6':4,5]phenanthro[2,1,10-def:7,8,9-d'e'f']diisoquinoline-6,11-dione, 9,9-dioxide (9CI) (CA INDEX NAME)

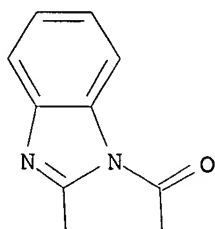


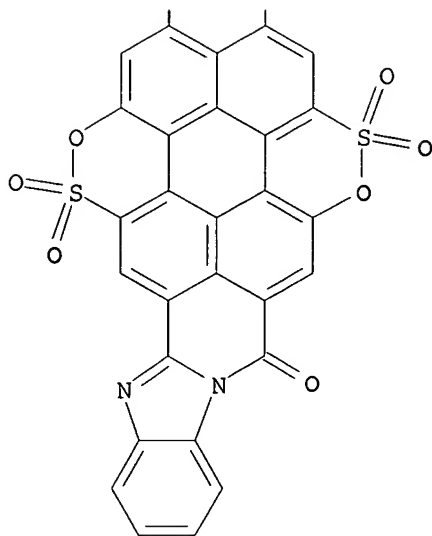
RN 784179-86-8 CAPLUS
 CN Bis[1,2]oxathiino[3''',4''',5''',6'''':1'',12'';
 6''',5''',4''',3''':6'',7'']perylene[3'',4'':3,4,5;
 9'',10'':3',4',5']dipyrido[1,2-a:1',2'-a']bisbenzimidazole-10,21-dione,
 7,7,18,18-tetraoxide (9CI) (CA INDEX NAME)



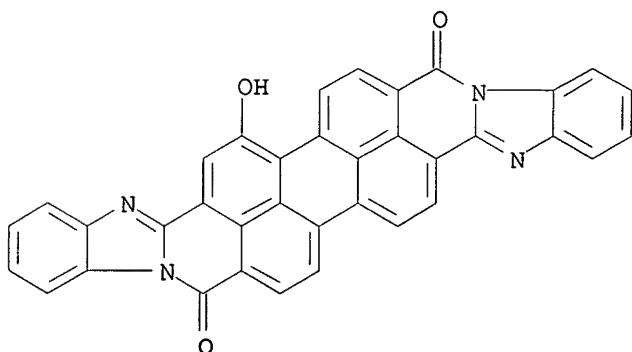
RN 784179-87-9 CAPLUS
 CN Bis[1,2]oxathiino[3''',4''',5''',6''':1'',12'';
 6''',5''',4''',3''':6'',7'']perylene[3'',4'':3,4,5;
 10'',9'':3',4',5']dipyrido[1,2-a:1',2'-a']bisbenzimidazole-6,11-dione,
 9,9,20,20-tetraoxide (9CI) (CA INDEX NAME)

PAGE 1-A

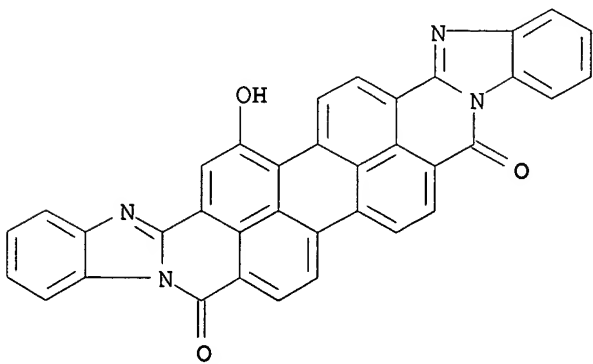




RN 784179-90-4 CAPLUS
 CN Bisbenzimidazo[2,1-a:2',1'-a']anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-10,21-dione, 7-hydroxy- (9CI) (CA INDEX NAME)

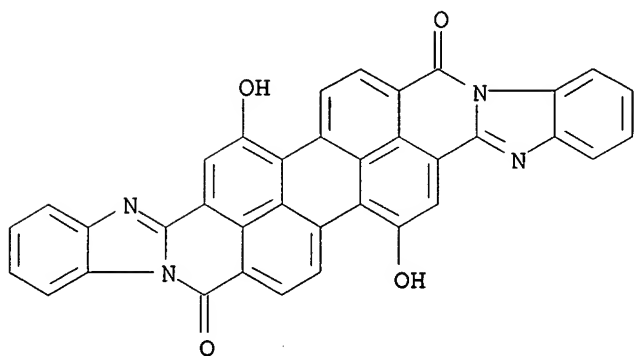


RN 784179-91-5 CAPLUS
 CN Bisbenzimidazo[2,1-a:1',2'-b']anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-6,11-dione, 19-hydroxy- (9CI) (CA INDEX NAME)



RN 784179-94-8 CAPLUS
 CN Bisbenzimidazo[2,1-a:2',1'-a']anthra[2,1,9-def:6,5,10-

d'e'f']diisoquinoline-10,21-dione, 7,18-dihydroxy- (9CI) (CA INDEX NAME)



RN 784179-95-9 CAPLUS

CN Bisbenzimidazo[2,1-a:1',2'-b']anthra[2,1,9-def:6,5,10-d'e'f']diisoquinoline-6,11-dione, 8,19-dihydroxy- (9CI) (CA INDEX NAME)

